ABOUT RAW JUICES

their therapeutic value and uses

John B. Lust

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The juices of fresh fruit and vegetables play a vital part in restoring and maintaining optimum health, and this book shows you how to select, prepare and use such life-giving and delicious drinks both for fortification against disease and for the specific treatment of certain ailments.

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Their Therapeutic Value and Uses

by
JOHN B. LUST

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CHAPTER ONE

LIFE FROM LIVE FOOD

TENNYSON, once musing on a tiny flower, realized that if he could fathom the secret of its minute existence, he would understand the meaning and greatness of life:

Flower in the crannied wall,
I pluck you out of the crannies
I hold you here, root and all, in my hand,
Little flower—but if I could understand
What you are, root and all, and all in all,
I should know what God and man is.

What Tennyson said of the flower is equally true of living fresh fruits and vegetables. Locked within their millions of cells are not only vitamins, minerals, enzymes and nutrients, known and unknown, but *Life* itself. Somewhere there is a magic combination, a coordinated relationship of Life-forces which man has been unable to duplicate—and which he will never be able to duplicate because man is not God and cannot create Life. But man can partake of Life through his God-given intelligence when he partakes of Nature—*as Nature is.*

We do not pretend to understand fully why fresh fruits and vegetables and their juices are so potent. Their potency cannot be attributed to their vitamin and mineral content alone, though this is extremely important. We just know from experience that they play a vital part in restoring and maintaining optimum health. Since they are here for you why not reach out for Life? We'll set forth a guide in the following chapters to help you learn how many different ways raw juices can help you.

CHAPTER TWO

CHEMICAL BALANCE IN THE BODY

ALL LIFE is based on chemical action; every thought and every movement of the body causes chemical change. For the human body to function with perfect efficiency, the basic chemicals that the body is composed of must be supplied in their right balance.

For example, if the human body is deprived of its right amount of phosphorous, there is disturbance in the nervous system. If we do not get the right amount of calcium into our bodies, we find various deficiency diseases result. Arthritis, bad teeth, pyorrhea and skin diseases appear.

Nature provides an abundance of life, vital materials for continuous regeneration of the body. But most people, ignoring this largesse about them, are minerally starved. Therefore they grow old, bent, broken and wear the mask of old age.

We can drink far more vegetable juices than we can eat of the vegetables from which the juice is extracted. While some of the cellulose of the vegetable is very valuable, the juice is a pure concentrated form of live material which, if taken in sufficient quantities, will continually revitalize the body.

Old encrustations and deposits will be removed, and the cells will be charged with the electric, magnetic energies of the live materials. New energy will surge through

our body. It is just as easy to acquire the habit of drinking live materials in the form of vegetable and fruit uices as it is to acquire the destructive habit of drinking poisons, such as tea and coffee.

Vegetable drinks can be taken at any hour during the lay or night. For quickening energy, relieving fatigue, nd bolstering up low spirits nothing surpasses them. hey are life-giving, youth-giving and health-giving rinks.

The continuous and persistent practice of getting fruit nd vegetable juices into the system, as we will show in his book, is one of the secrets of good health and youthulness. For instance, your nerve system requires material o make nerve energy. Most people will stimulate themelves with some type of injurious stimulant such as tea, offee, tobacco or alcohol. When a live juice cocktail is ut into your body every one of the twenty-six thousand illion cells of your body receives a charge of life-giving naterial. Experiment with the various drinks and cominations outlined. Become a research worker in the field f dietetics. Find out which one of the vegetable juices ives you the greatest amount of vital energy, and then se it in abundance.

Remineralization

We learn that there are about ninety different minrals represented in the twelve basic organic minerals. If ll people would get their full supply daily they would ever suffer from any of the many diseases which attack he human body when it is minerally starved. The cure or any disease must necessarily be a complete remineralvation of the body and a detoxification for the removal f the cause of the disease. Symptoms are all too freuently, and mistakenly, called "disease" and treated as

such. When the cause is removed, the symptoms of that cause will spontaneously disappear.

Nature, given a chance to cure, and supplied with her own kind of materials to work with, will do her repairing far better than any human physician can ever hope to do. Regeneration and revitalization depend upon cleanliness of the cell tissue and upon an adequate supply of the twelve basic minerals.

CHAPTER THREE

SOME OF MOTHER NATURE'S SIMPLE REMEDIES

The Basic Mixture for Daily Use

4 ounces—carrot juice
2 ounces—celery juice
2 ounces—apple juice

This combination covers a wide range of the needs of the average person. It provides many of those factors which are missing in the daily diet of the average person, thus resulting in certain forms of today's degenerative diseases.

Each of the foods is rich in minerals. The celery, however, is especially rich in sodium which is helpful in those diseases of chemical derangements, such as arthritis.

The carrots provide the pro-vitamin A which is converted to the body's all-important vitamin A by the liver.

The apple juice, besides its mineral content, has the anti-infection vitamin C, and provides the enzyme action which aids the bodys digestive functions.

Also, you who have your natural teeth will find that these three foods when eaten fresh and raw help to keep the teeth clean.

The Insomnia Cocktail (FOR THOSE WHO DESIRE A FULL, REFRESHING NIGHT'S SLEEP)

Wash celery and put through the juicer. Some of the

leaves can be used, but they are bitter, so do not use too many, as it will make the cocktail bitter.

This cocktail is specifically recommended for those who cannot sleep well, get up tired, and always have a tired feeling; also for those who are nervous or jittery.

Also, because of its diuretic action, celery has become a common folk remedy for dropsical conditions. It should not be used in cases of acute inflammation of the kidneys, but Leclerc, the famous French physician, frequently prescribed it (and with success) for the treatment of chronic Bright's disease.

Kidney Cleanser Cocktail

There is no one fruit that has the curative properties of the tomato. In the past few years tomato juice has become one of the world's most popular drinks. Many delicious health cocktails can be made by using tomato juice blended with other vegetable juices.

The Kidney Cocktail is made by blending the juice of two or three stalks of celery with a glass of tomato juice.

Blood-Building Cocktail

The juice of several handsful of fresh, crisp spinach, two or three leaves of lettuce and a handful of parsley. Blend with tomato juice.

This drink is rich in copper and iron. It gives a charge to the blood.

The Artery-Softening Cocktail

Specifically recommended to those who want to keep their arteries elastic. It is also a very valuable drink for sufferers of high blood pressure.

This cocktail is made by putting two or three young tender beets through the juice extractor. This will give

ou one of the most beautiful and appetizing cocktails in he vegetable world.

After having extracted the juice of the beets, add rapefruit juice and you will have one of the most alka-ine drinks that you can possibly put into your body.

The Liver Cocktail

The liver is probably one of the most abused organs of he whole body, as the blood must constantly be strained hrough it, and the average person's blood is full of toxic naterials resulting from a devitalized and synthetic diet.

Put one-half of an onion and three or four radishes—ither red, white or black variety—through the vegetable uice extractor. Then add pineapple juice.

This health cocktail is rich in organic sulphur and will ive the overworked liver a good renovation.

The Gall Bladder Cocktail

This cocktail is made of the juice of tender rhubarb nd fresh young asparagus, with a sufficient amount of rapefruit juice added to prevent the rhubarb from sting-ng.

It is especially recommended to all those who have had he gall bladder removed and to those who are suffering rom gall stones or faulty functioning of the gall bladder.

The Arthritis Cocktail

Cut unpeeled cucumbers into slices and put through he juice extractor. The cucumber is needed for its tre-nendous amount of organic sodium, which dissolves the oreign lime deposits in the body. After having extracted he juice of the cucumber, add an equal amount of un-weetened pineapple juice and the juice of half a lime.

This cocktail is especially recommended to people who have swollen joints and lime deposits in any part of the body.

The Gland Cocktail

Blend the juice of a handful of crisp watercress with an equal amount of pineapple juice.

This cocktail is specifically recommended to sufferers with endocrine deficiency, such as goitre and troubles of the reproductive organs.

CHAPTER FOUR

HOW TO SELECT AND PREPARE FOODS FOR THE JUICER

In selecting foods with which to make the best health drinks choose the young, tender, heavier, more solid fruits and fresh vegetables—those with a deep colour. They contain more juice. Don't make the mistake of thinking that because the fruit or vegetable is going through a juicer that you can use some of the wilted pieces. You only get out what you put in. So, remember, the best looking and best tasting will give you the best juice.

Use both the leaves and the roots of vegetables. They yield an abundance of organic minerals. The tops of carrots, particularly, contain a rich source of phosphorous. Everybody desiring more nerve energy should use the juice from the tops of carrots blended with other vegetable juices such as celery or tomato juice.

When making juice drinks be sure to squeeze a dash of lemon into the juicer before putting the vegetables through. It is also a good idea to put a few drops in the glass or container which catches the juice. This will bring out the flavour of the juice.

Due to the sprays of arsenic and lead that are used on fruits and vegetables, it is best to soak them (uncut) in a dishpan of cold water with a handful of ordinary salt. Then they should be washed again in cold water. To remove sprays that do not come off with this method it is advisable to go to your druggist and buy a supply of

chemically pure hydrochloric acid. Mix one ounce of this acid thoroughly with three quarts of water. This will make approximately a one per cent solution. It is best to keep this spray remover in a large glass jar. After you have removed the vegetables from the clear cold water, put them in the solution of hydrochloric acid for five minutes. Then give them another bath in clear water. The same solution of hydrochloric acid can be used for four or five days. This procedure is time consuming but it is worth while when the fruits or vegetables are badly coated with poisonous spray.

Housewives sometimes wonder if brighter looking vegetables are superior to the duller kind.

That depends on how the brightness is derived. When you buy vegetables which look bright because they recently left the farmer and did not spend too much time in transportation, where they may have wilted and lost most of their vitamins, then you are justified in choosing bright looking vegetables. This is not, however, always a true indication. Vegetable men have a practice of frequently sprinkling vegetables. This will give the false and misleading impression of freshness. Of course, sprinkling does not make up or prevent the loss of vitamins. As a matter of fact, it may wash out some of the water soluble vitamins. This writer, who does not grow his own vegetables, cannot go around with test tubes to check whether or not the vegetables he buys in stores have and contain all the necessary vitamins, and minerals, due to aging or due to growth of proper soil. Synthetic vitamins, no matter how potent, cannot take the place of certain trace minerals or trace vitamins which are only present in natural complexes and never in mixtures of purely synthetic or part natural-part synthetic dilution.

CHAPTER FIVE

THE VALUE AND USES OF FRUIT AND VEGETABLE JUICES

It is deplorable that a large part of the nutritive value of our foods is lost by irrational preparation, particularly by overcooking.

The tender leaves and stems of fresh vegetables contain the largest percentage of alkaline bases; hence they are not only useful as garnishes but should be featured as salads, juices and vegetable dishes.

The majority of people, however, owing to defective teeth and haste in eating, prefer the processed foods, *e.g.* the soft white breads. The starches, sugars, fats and proteins which we eat to excess are clogging and acid-forming. Cooking this material renders the excess starch more soluble in the bloodstream and so the blood and consequently the whole system become encumbered.

Only when taken in a large enough quantity can the natural vitamin, mineral and enzyme-rich foods counteract this clogging of the body's system. By drinking the juices of fresh fruits and vegetables we can greatly increase our consumption of their value.

Many of the fruit juice beverages on the market today are fruit juices considerably altered in composition before they are consumed. Many of them are diluted with water and sweetened with white cane sugar. The beverage may or may not be charged with carbonic acid gas. Examples of fruit juice beverages are orangeade, lemonade and bottled strawberry soda water. Health seekers

should insist on the pure, unadulterated, unfermented and unsweetened fruit juices, free from colouring matter, sugar, alcohol, added fruit acids, chemical preservatives and coal tar dyes.

The great dietetic and hygienic value of pure fruit juices is not yet appreciated by the vast majority of people. Fruits differ from practically all other foods by the fact that their nutritive elements exist in the soluble forms of organic sugar, dextrin and fruit acids, which are found almost exclusively in their juices. The dry pulp left after the extraction of the juice contains almost nothing except cellulose and a little protein. It is therefore inaccurate to deny that pure fruit juices of all sorts are exceedingly wholesome, for they contain all the valuable properties of the fruits from which they are extracted.

The aromatic oils of fruit juices which contribute to their subtle characteristic flavours are appetizing, and thus aid digestion. In all likelihood, people who relish light wines value them for their fruity flavours rather than for any effects experienced from the alcohol present. Discriminating home-makers should therefore exert every effort to give pure fruit juices the worthy and dignified position they merit in the rational dietary, namely as a food staple and not merely as a luxury or accessory.

Their almost complete absence of fats and proteins and their possession of fruit sugar in a manner that is prepared for immediate absorption, renders pure fruit juices trustworthy adjuncts for those on reducing and eliminative diets. Many fruit juices, moreover, blend harmoniously with one another for cocktails and punches, contribute by their colour and aroma a mark of distinction to desserts and home-made candies; and serve admirably as a basis for gelatine and jellies where clarity, colour and fine fruity flavour are sought.

The almost immediate effects experienced by a fati-
ed person after taking pure fruit juice is due to the
itritious energy released by its fruit sugar content,
nost instantaneously utilized by the body. Natural
uit sugar is a great source of potential energy.

The popular idea that the acids of fruits are unwhole-
me for persons suffering from gout, rheumatism and
her uric acid disorders is entirely without scientific
sis and has wrought much mischief. Quite to the con-
ary, the water contained in fruits is an absolutely pure
te, distilled in Nature's own laboratory and is there-
re of great value in dissolving and removing impurities
the body. Many Naturopaths have advised so-called
uit juice fasts for a week or two to help excrete toxins
d to reduce blood pressure.

Fruit juices preserve and increase the alkaline reserve
the blood stream; these alkaline elements, which are
emically combined with the fruit acids, act as natural
xatives by promoting the action of the secretory glands.
uit acids are always found in connection with the alka-
ne salts of potassium, sodium, calcium, magnesium,
.; like carbohydrates, they are oxidized into carbon
oxide and water, and under normal conditions fruit
ids always have an alkaline reaction.

Those who suffer from an acid condition of the blood
d inflammation of the digestive organs can improve
eir condition by partaking first of fresh raw vegetable
ces, supplemented by plenty of green-leafy vegetaables
her slightly steamed or in the form of combination
ads, until hyper-acidity has passed away and normal
nditions are restored.

Fruits are generally divided into three classes accord-
g to the amount of fruit acid they condition: viz. acid,
o-acid and sweet fruits. The chief fruit acids are malic,

tartaric, citric and oxalic acid. The fruit acids occur usually as acid salts of potassium, sodium or calcium, imparting an agreeable flavour to the juice, and adding a wholesome and stimulating variety to food. Malic acid is chiefly found in apples, pears, currants, berries, pineapples, grapes and cherries. Tartaric acid occurs especially in the juice of limes, lemons, grapefruit, oranges, currants, unripe tomatoes and gooseberries. Oxalic acid is contained in small amounts in raspberries, tomatoes, grapes and currants, while only a trace is found in oranges, lemons, plums and apples. During the process of ripening, the fruit acids are reduced as they are slowly transformed into sugar.

It is gratifying to note that in many parts of Europe the so-called "grape cure" during the harvest has become very popular. It is used in many health resorts in southern Germany, Austria and northern Italy where people live on grapes exclusively for from four to six weeks, increasing the quantity from three to eight pounds daily according to age and constitution. The cure is especially helpful in diseases of the respiratory organs and kidneys, also in anaemic conditions. The beneficial action of the grape cure is due chiefly to the simplicity of the diet, which furnishes the protein and carbohydrates in most assimilable form, while the large proportion of alkaline salts such as potash, lime, magnesia and iron reduce the acidity of the blood. Fresh grape juice also contains vitamins B and C which are partly lost in the pasteurized or preserved juice.

If taken slowly and not added to a heavy meal, fruit juices require only a small expenditure of nerve force in digestion; they are thus ideal beverages for children, the aged and convalescents.

hildren Love Vegetables in Juice Form

Many children will not eat spinach or raw vegetables, ut when one of these delicious cocktails is made, a child ill drink as much spinach juice at one time as in ten eals of spinach. Not that this is precisely what you want ach time, but it is a good example of how you can regute a child's diet far easier with raw juices properly prered. But, these juices are not only for children, this is lso true for everyone—even for a person with a very ensitive stomach. Many of the people suffering from irriation and inflammation of the digestive tract find it imossible to eat foods that contain roughage and bulk. Vith raw juice therapy even those suffering from acute lcer conditions can revitalize their bodies with the nonritating juices of fruits and vegetables.

Raw Juices Not Limited To Cocktails

These juices are a fortification and a protection, as hey raise the resistance of the body. Those who have the ealth cocktail habit find that they do not suffer with olds, influenza and sore throat because their resistance raised by these excellent vegetable juices.

Raw juice therapy is not limited to health cocktails nly, as vegetable juices when combined with cream or ilk make very delicious and healthful soups.

Put a handful of raw spinach into the hopper of your uicer and in moments you will get a cupful of beautiful astel green liquid. Add this spinach juice to a pint of ilk or cream and heat it to a palatable temperature. ou now have a nourishing food drink fit for the gods—drink which will insure the individual who partakes of a rich supply of life-giving minerals. Carrots, celery and eets also make delicious soups.

Some Tasty Fruit and Vegetable Drinks

Those who prefer the more tangy juice flavours will find cabbage juice with an ounce of dandelion, watercress or mustard green juice added, very tasty. More tangy taste can be achieved by adding a few drops of lemon, lime or grapefruit juice.

Rich peach juice, which is heavy, prepared from the fresh peaches, either by itself or topped with cocoanut or cream, is a new food delight. Pineapple and cantaloupe juice mixed half and half provide one of the most satisfying taste combinations of all.

Freshly extracted grape juice of any variety of grapes is nourishing and pleasing. The grapes are rich in minerals and contain vitamins A, B, C and G.

Above all, it is live foods which taken in their natural form aid the metabolism of the human body and thus provide the basis of health and happiness.

CHAPTER SIX

THE NUTRITIVE AND CORRECTIVE EFFECT OF APPLE JUICE

One of the most important—and delightful—of the esh juices in illness and in health is apple juice.

Apple juice is rich in vitamins and minerals. Freshly xtracted apple juice contains substantial amounts of tamins A, B1, B2, B6, P-P and C, also pantothenic acid nd biotin. The mineral content is especially rich, and ncludes calcium, phosphorous, iron, magnesium, potas-um, sodium chlorine and sulphur.

Apple juice in the morning—before breakfast—en-ourages elimination and tones the system. Apple juice quickly assimilated. The pectin in apple juice forms a elatin which dissolves the toxic poisons and caking hich forms in the lining of the intestinal tract, and pro-notes peristaltic activity.

The vitamin C content of apple juice helps to prevent nd to combat intestinal infections, for vitamin C is part f the body's defence mechanism against bacterial toxins. itamin C also improves the appetite; protects the blood essels, lymphatic tubes and other cavities. It is also essen-al to the proper functioning of the glands.

Vitamin A, also found in apple juice, is closely allied to nd works harmoniously with vitamin C in clearing up nfections in the stomach and intestines. Vitamin A is ssential to general health, epecially in stimulating the ecretions which lubricate the mucous membranes roughout the body.

The vitamins of the B complex contained in apple juice also stimulate the appetite and aid the digestion and assimilation of foods. These vitamins are essential for the normal functioning of nerve tissue and cell respiration, and for the promotion and maintenance of general good health, as well.

The malic acid in apple juice is an excellent antiseptic, or disinfectant, for the stomach and intestines. It has highly valuable dietary benefits in the treatment of gastric and intestinal catarrh, loss of appetite, disorders of the liver and kidneys and general malnutrition.

Children love fresh apple juice. It is not only a delicious and nourishing beverage, but it helps to keep them well. It is mildly laxative and, when taken first thing in the morning, the habit of elimination immediately after breakfast easily becomes established.

The example of little Susie S. is typical of many similar cases among both children and adults:

The Case of Susie S.

Little Susie S. stood listlessly looking out of the window. Her mother watched her anxiously. What had happened to the gay little girl who had romped joyously from morning until night only a few months ago?

This new Susie was listless, irritable and fussy. Her appetite was poor and she was much too thin. Her teacher had spoken to Mrs. S. about Susie's inattention and "dopiness" in school. Her little friends seemed to prefer pleasanter companions. And Susie was obviously unhappy.

That evening Mrs. S. decided to speak to the family doctor about it. He was a neighbour and had four sturdy youngsters of his own who never seemed to present either physical or psychological problems.

"The child's constipated," was the immediate verdict. We had the same thing happen when our first boy tarted school. You see, the school routine is a complete hange for Susie. She is less active. She must sit still for ong periods. Rather than make herself conspicuous by sking permission to leave the room, she will wait. You, ourself, in your efforts to get Susie off to school, pro-ably have not been as observant of her elimination abits as you formerly were."

After he prescribed a mild herbal laxative to correct he immediate condition, he continued: "The way we olved the problem in our house is simple. We make up quart or so of fresh apple juice. Each one of us has a enerous glass before breakfast. We find that it just aturally takes care of elimination and tones the system or the day. And we always keep a jar of it in the refri-erator for snacks during the day and evening. We all ove it."

Susie again is a normal, happy little girl, since she is ow getting her apple juice regularly. She goes to school vith enthusiasm and is attentive to her classroom activi-ies. Again she is popular with her playmates. And all nembers of the family have adopted the habit of a glass f fresh apple juice every morning—to "start the day ight."

A Universal Complaint

Constipation is generally referred to as the universal ailment. Everyone, practically, has suffered its discom-ort at one time or another. This is because our foods have become too highly refined and because we eat houghtlessly and too hurriedly. The most important ause, however, is that we do not eat enough of the right inds of foods.

Constipation is found to exist in practically all cases of illness. In a large number of ailments, in fact, physicians believe it to be a serious causative factor. Faulty elimination, even when it does not involve actual illness, does much to take the joy out of life. It makes one feel groggy and heavy. It is difficult to see the bright side of life, or to enter into work or play with zest and enthusiasm.

And laxatives and cathartics do not solve the problem. In fact, they aggravate it. When laxatives become a habit the intestinal tract loses its tonicity and refuses to function without such outside stimulation. In many cases of illness, a laxative or an enema may be necessary. However, such prescription is a temporary measure and should not be continued beyond the period advised by your physician. Do not let laxatives become a habit.

Most normally healthy people should have a daily evacuation. Some—according to the amount and type of food eaten and exercise taken—might have two movements a day. Others who are inactive and eat lightly may have a bowel movement only every alternate day. The important thing is to establish the rhythm that is right in your case, and to make sure that this rhythm is maintained. Those in the "alternate" group, however, would do well to include more vitamins and minerals in their diet and bring the rhythm up to the daily evacuation schedule. This can be done easily with fresh fruits and vegetables and their juices.

Doctors are practically unanimous in the opinion that the curse of constipation could be practically wiped out if dietary fundamentals were generally understood, and if the proper foods were generally available to all our people. Our meals should be properly balanced to include all of the essential nutrients. The vitamins and

minerals are of special importance in maintaining the body in health and the mind alert.

Freshly extracted apple juice is Nature's greatest regulator. It not only keeps the intestinal tract toned to smooth, natural functioning, but it is a valuable supplement to the diet. Apple juice is not a medicine. It is a delicious, nourishing food beverage which brings to you the beneficent blessings of nature's oldest and most popular fruit. And it is of outstanding importance in building and maintaining glowing health and vigour.

Apple Juice Cocktails

Try the following delicious juice combinations taken from "Raw Juice Therapy":

8 oz. apple juice—8 oz. carrot juice.

5 oz. apple juice—6 oz. carrot juice—5 oz. celery juice.

6 oz. apple juice—8 oz. carrot juice—2 oz. spinach juice.

Cider Milk

Here's an old European remedy used not only for its healing qualities but for its nutritional value as well. Heat equal parts of cider (preferably alcohol-free), milk and water to just below the boiling point and then separate the curd from the milky fluid by filtering it through a piece of clean linen cloth. Honey or fruit juice may be added to taste. The resulting "milk" should be taken one or two tablespons at a time, three times daily. It is said to improve bowel function, clear a coated tongue, stimulate kidney function and flagging appetites and has also been recommended as a remedy for kidney stones and for coughs.

CHAPTER SEVEN

CARROT JUICE—THE "MIRACLE" JUICE

CARROT JUICE, because of its many healthful benefits, i frequently called the "miracle juice". A large number o people—in all walks of life—suffering from various ail ments—have found that the inclusion of carrot juice i their diet has greatly improved their health. Countles others have found it to be a valuable "protective" agen in the building and maintenance of health in both chil dren and adults, while its delicious flavour makes i popular with all members of the family as a beverage— plain or combined with other juices.

Gold Mine of Nutrients

Carrot juice is one of the richest sources of vitamin A that can be used in the daily diet. It also ranks high as a source of the other vitamins, especially those of the B complex. Its mineral content is equally rich, and in cludes calcium, copper, magnesium, potassium, sodium phosphorous, chlorine, sulphur, and iron.

The vitamin A content of carrot juice helps to streng then the eyes. In many cases where defective eyesight was noted—as during the war—the condition was overcome by fortifying the diet with fresh carrot juice.

One of the first evidences of vitamin A deficiency may be noted in the difficulty of adjusting the sight in a dim light, as in entering a dark room, or theatre, from a

ightly lighted hall. A more serious symptom is the in-
ility to regain focus of the road after the glare of pass-
g automobile headlights. This sight defect is known as
ight-blindness", or "glare-blindness", and has been
e cause of many serious accidents.

Vitamin A is essential in keeping in healthy condition
e mucous membranes which line all the cavities of the
dy. The mucous membranes may be described as con-
sting of two layers. The top layer, known as epithelium,
composed of billions of cells. Close under the epithe-
um lies the mucous membrane, a thin layer of involun-
ry muscle fibres, which are extremely pliable and
astic. The vitality of this lining depends upon an ade-
uate supply of vitamin A. When a deficiency of vitamin
exists the cells harden and degenerate into a horny,
ugh surface, obstructing the normal function of the
cretion of the disinfectant mucous. Infections resulting
om vitamin A deficiency may affect the bladder or kid-
eys, the alimentary tract, the mouth, tonsils, sinuses, the
ngue, ear canal, eyes or tear ducts.

Vitamin A promotes growth of bones and teeth, the
aintenance of healthy body tissues, and the mainten-
nce of normal glandular functions. It aids in the resist-
nce to infections.

Vitamin A is especially necessary in the diet of expec-
nt mothers to build up and maintain the health of both
other and the developing child. Fresh carrot juice
ould be included in the diet not only during preg-
ancy, but also during the period of nursing the baby.

In addition to those already mentioned, some of the
mptoms which have been traced to vitamin A defi-
ency are: dry, scaly and rough skin, especially on the
ms and legs; intestinal disorders and diarrhea; poor
petite; retarded growth; lack of vigour; loss in weight

and physical weakness; atrophy of the glands; poor development of teeth through defective formation of enamel and dentine—and poor gum structure; and may also be a causative factor in cases of sterility; nerve degeneration and stones in the kidney and bladder.

It is pointed out by many authorities that where a vitamin A deficiency exists, it may be the result of either an inadequate amount of this vitamin in the diet, or of faulty metabolism. The latter condition may be a symptom of some physical disorder which requires diagnosis and treatment by a physician.

Another cause of vitamin A deficiency is the practice of using mineral oil which carries off the vitamin A before it has been absorbed by the system. Mineral oil should not be used in salad dressing for this reason, and under any condition, should be used only on the advice of a physician, and then only as a temporary measure.

When changes occur in the tissues because of vitamin A deficiency, the natural protection against bacteria is removed and the tissues become diseased. An adequate intake of vitamin A—especially in carrot juice—will help overcome infection.

Vitamin A is soluble in fat but not in water, Consequently, surplus vitamin A is not lost in the body fluids such as urine, perspiration, etc., but is stored for future use. Approximately 95 per cent of all such surplus vitamin A is stored in the liver, with small amounts in the kidneys, lungs and under the skin.

Your Daily Requirements

The Food and Nutrition Committee of the National Research Council has established a scale for the minimum daily requirements of vitamin A as follows:

	INT. UNITS
Children under 1 year	1,500
Children 1 to 12 years	2,000 to 3,500
Adolescent girls	4,500 to 5,000
Adolescent boys	4,500 to 6,000
Adults—men and women	5,000
Women during pregnancy	6,000
Women during nursing period	8,000

The above scale is based upon the minimum required o prevent deficiency diseases and does not provide the ecessary surplus required for full health.

It is impossible to determine, with any degree of scien- ific accuracy, what the daily requirement is for any ndividual under varying physical conditions, and how nuch of the vitamin A intake the body is able to absorb t any given time due to metabolic conditions or other actors.

The liver is capable of storing large quantities of vita- nin A over a period of years to be called upon when eeded. In order to keep this surplus at an adequate oint, an ample daily intake should be provided. For xample, an 8-ounce glass of fresh carrot juice will pro- ide an average of 50,000 or more units of vitamin A. In his form the vitamin is readily absorbed, fills the daily equirements and adds to the surplus accumulated to neet any emergency.

The amount of carotene (which is converted to vita- nin A in the liver) contained in carrots is indicated by he depth of the colouring matter. The large, firm, dark- ellow carrots, therefore, should be selected for juicing, ather than the light-yellow ones, because of their greater arotene content.

Another vitamin contained in carrot juice is vitamin

E. This vitamin appears in three forms, known chemi
ally as alpha-, beta-, and gamma-tocopherol, and con
monly known as the vitamin E complex. In anima
experimentation, vitamin E has been found to affe
reproduction. When foods bearing this vitamin were fe
to animals which had failed to reproduce, their sterilit
was overcome.

Vitamin E and Cancer

Another intensely interesting study being made is th
relation of vitamin E to the new growth, or division, o
cells necessary to keep the tissues in healthy repair. I
laboratory tests, when cancer tissue was placed in a vit
min-E-rich blood serum, the cancer tissue did not grow
When a blood serum lacking vitamin E was used in
similar test, the cancer cells grew readily. The conclusio
drawn from these tests was that cells divide normally i
the presence of vitamin E. When this vitamin is lackin
healthy cell division does not occur and cancer cells a
permitted to grow. Other tests brought out the fact tha
where experimental animals were fed food rich in vit
min E they resisted cancer, whereas those fed foods lac
ing this vitamin developed a cancerous condition.

While information at this time is incomplete as to th
relation of the vitamin E complex to human nutritio
and body processes, it is believed that further exper
ments will bring some dramatic developments. In th
meantime, it is safe to assume that—as with all of th
other vitamins—vitamin E complex plays an importa
part in building vital health. It is a wise precautio
therefore, to include plenty of carrot juice—and oth
vitamin E foods—in the daily diet.

Because of its rich vitamin and mineral content—a
other valuable nutrients—the daily diet should be for

ed with the protective and healthful benefits of carrot
uice. It can be taken alone, or combined with other
uit and vegetable juices; or mixed with milk or cream
-or ice cream, as in a milk shake.

reparing Carrots for Juicing:

Wash carrots thoroughly in cold water, using a stiff
egetable brush. Scrape lightly, but do not peel, as valu-
ble vitamins and minerals lie close to the surface. The
uice should be taken immediately when it is made, if at
l possible. If not, let the juice flow directly into glass
rs which should then be covered with screw-on lids.
fter pouring the quantity to be used immediately, keep
ne remaining juice—tightly covered—in the refrigera-
or to prevent loss of vitamin and mineral content
hrough oxidation.

Carrot juice blends with practically all other juices, as
ell as with milk and cream. It is a delicious, nourishing
everage for all members of the family at all times and it
hould be an important part of the diet in cases of illness.

CHAPTER EIGHT

TUMOURS AND THE RED BEET JUICE THERAPY

In October 1950, Dr. S. Firenczi, head director of th county clinic at Csorna, Hungary, started giving med cinal doses of red beets to the tumour patients who cam to his clinic. (The idea of using red beets had come fro Kunstmann who in 1938 had reported using them in le kemia cases with good results.) One half to one kil gramme daily of raw, mashed red beets, in small dos after meals—and between meals if the patient so desire —were given to those cases who were willing to acce the beet therapy. In some cases, raw beet juice diluted water was used instead because the patient could tolera it better.

Dr. Firenczi had remarkable results in 15 out of cases; the cancerous growths were definitely reduced, th patients gained from six to 21 pounds and their bloo count changed for the better.

The remarkable effectiveness of the raw red be therapy was graphically demonstrated by a comparis with a similar tumour case which did not receive be therapy. Dr. Firenczi had one patient with tumour the prostate and another with the female equivalen tumour of the uterus. Both patients weighed the sam upon entering the clinic. The prostate tumour patie took daily doses of beet juice; the uterine tumour patie could not tolerate beets in any form. After one mon on the beet therapy the prostate patient, who had need

catheter on arrival at the clinic, was able to do without and it was not used again. His condition had improved o such an extent that he was able to get about by himelf. The uterine tumour patient, on the other hand, was ot able to leave the bed and kept on losing weight. fter three and a half months, the difference between the wo was even greater for the man had gained 21 pounds hereas the woman had lost even more weight.

Another striking example is the case of the patient ho, prior to admittance at the clinic, had been operated n for breast concer. She had come to the clinic because f recurrence of the condition. She was immediately laced on the beet therapy. At the time Dr. Firenczi rote his report, this patient had shown a decided imrovement and there had been a decrease in the metatatis. (Metastatis is the transference of the disease from he first point at which it occurred to a distant point; the gents or cells causing it are carried through the blood essels or lymph channels.)

Though the results of this report cannot be conclusive ecause of the small number of patients involved, Dr. irenczi, needless to say, is continuing with the beet herapy in his clinic.

The Ten Day Programme

Bearing the above rationale in mind, we can now work ut a ten day dietary regime which will do much towards liminating any fibroid tumours. This ten day cycle may e repeated every two months until the condition is leared up. The length of treatment, of course, will deend on the size of the tumour and the natural vitality f the individual.

First, second and third day: Should be devoted to a hort cleansing fast of three days in which only a glass of

diluted lemon juice is taken on arising and, thereafter, o grapefruit juice and/or orange juice may be taken whene desired, but not less than 16 ounces a day. During this peri complete rest is absolutely essential. Bathing can be ve debilitating so that only a quick, tepid shower should taken. It is also important to maintain normal bowel fur tion. Because of the lack of bulk during the fasting peri constipation may occur temporarily. In this case, a mi herbal laxative may be taken.

Fourth, fifth and sixth day: Continue with the dilut lemon juice on arising and at least 8 ounces of one of t citrus juices.

In addition, supplement the diet with 16 ounces of o of the juice combinations recommended by John Lust *Raw Juice Therapy* and listed earlier in this book.

The following combinations are probably the best:

8 oz. carrot juice.
8 oz. beet juice.

Or:

6 oz. carrot juice.
5 oz. beet juice.
5 oz. cucumber juice.

Your meals should consist of some fresh, raw fruits, such apples, grapefruits, oranges, pears, pineapples, strawberrie

This combination of fresh fruits and the raw juic will generally provide the much needed stimulus f normal bowel movement. In a chronically constipat individual, however, it may not be sufficient, and, aga she may have to resort to a mild, natural laxative. It

ssential to the success of the treatment to maintain the owels open and every effort should be made to do this aturally. Only after all else has been tried should artiial means be used.

You should remember that after a drastic purgative ne nerve endings in Auerbach's plexus (the network of erves controlling the movement of the bowels) are deadned and a normal bowel movement will not occur for at ast 48 hours. Furthermore, the constant use of drastic urgatives will result in complete ennervation of the atural bowel reflex and it is one of the surest ways to nduce a state of chronic constipation.

Seventh, eighth, ninth and tenth day: You can now o on to a modified diet, but fill it in as follows:

On arising: Diluted lemon juice.

Breakfast: One glass of orange and/or grapefruit juice; and apple or a pear.

Lunch: A starch food such as a slice of whole wheat bread or a white or sweet potato (with skin); a raw salad which should include some cucumbers, chard and watercress as well as at least two other raw vegetables; a glass of raw juice combinations; fresh fruit.

Dinner: Steamed beets and spinch (or any one of the vegetables previously recommended for tumours); one of the legumes; cheese (not processed kind) or milk; fresh fruit.

On retiring: A glass of one of the recommended raw juice combinations.

You should take care to include in every meal at least wo of the fruits or vegetables recommended for cases

of tumours. In addition to these, vary the other vege
ables and fruits called for each to insure an abundan
supply of all the nutrients. If you are hungry betwee
meals, eat a raw fruit or drink a glass of raw vegetabl
juice.

CHAPTER NINE

MEDICAL USE OF CABBAGE JUICE FOR HEALING GASTRIC ULCERS

THE CONCEPT that peptic ulcer may be a dietary deficiency disease is not entirely a new concept, since it was shown in 1940 and in 1942 that fresh green vegetables and certain other articles of diet contain some anti-ulcer factor which promotes the healing of peptic ulcers which have been produced experimentally; and in 1949 it was shown that this same factor might benefit man. Since then there have been additional clinical reports on this subject. This concept should be well recognized by all those physicians who take the responsibility of treating patients with peptic ulceration, and may be stated as follows:

1. There is a lack of the dietary anti-ulcer factor (or factors) tentatively called vitamin U. This food factor is apparently essential to the preservation of the health of the mucosa of the digestive tract in the sense that it is responsible for the maintenance of mucosal resistance to stomach or acid-pepsin digestion and ulceration.

2. This dietary factor is contained in varying amounts in a number of raw foods such as milk and eggs and in leafy green vegetables, and the quantity present is subject to marked seasonal changes. Its presence in cabbage has been studied by means of a number of animal feeding experiments. The results of these studies have been made the basis of its therapeutic use in man.

3. Vitamin U is readily destroyed by heat and inact vated by oxidizing processes. It is apparently destroye on prolonged exposures to light and to air. In these pr perties it is similar to natural vitamin K, with which is closely associated in nature.

4. A deficiency of vitamin U in man may be pure dietary in origin or it may be due to a conditioned de ciency disorder caused by some metabolic defect such a disturbance in liver function.

5. If the nature of the disorder of peptic ulcer is deficiency state this implies that relapses will occur if th diet does not contain adequate amounts of potent vit min U, and that, theoretically at least, preventati therapy may be necessary continuously in those patien who are prone to frequent relapse.

Originally a study of eighty-one ulcer patients w made wherein vitamin U was administered as fresh ra cabbage juice. The total daily dose was 1 quart. It w administered in divided doses. All but 6 patients treate during the past three years received a liquid juice co centrate. This concentrate has been administered doses which might be considered comparable to 1 or quarts of freshly pressed cabbage juice in that it has bee derived from this amount of fresh juice. Three patien received raw juice. In one case a fraction of solid jui concentrate was administered in the form of capsules to patients. When these capsules were utilized the do amounted to the equivalent of 100 gm. of whole ra cabbage daily.

In order to better analyze the results of treatment o jectively in the 81 cases of gastric ulcer they were clas fied into three groups according to the relative size of th ulcer craters as shown by X-ray.

The three groups are:

1. Small ulcers which vary between 0.3 cm. and 1.0 cm. in diameter. There were 43 such cases.
2. Large ulcers which vary from 1.1 cm. in diameter up to 2.4 cm. in diameter. There were 28 such cases.
3. Huge ulcers which vary from 2.5 cm. in diameter up to 4.5 cm. in diameter or larger. There were 10 such cases.

Consideration of the depth of the ulcer was also taken to account but in some cases measurements presented hnical difficulties which interfered with obtaining con-tently accurate serial results. The relative incidence of ese three groups of cases when completely studied is own in Table I, together with the results obtained ring treatment.

In addition to these X-ray studies a complete history d physical examination was carried out in each case d the patient was re-examined repeatedly during the riod of treatment, and whenever possible for three to months after the institution of vitamin U therapy. ne usual laboratory studies of urine, blood and stool re performed and a gastric analysis was also included the majority of cases. Two or more uropepsin deter-nations were carried out in 28 cases. Gastric wash for mour cells and tests of pancreatic and liver function re performed as indicated. A gastroscopic examination s limited to 12 patients. Additional X-ray examination the chest, colon, gall bladder, and urinary tract was dered when thought necessary.

sults of Vitamin U Therapy in 81 Cases of Gastric Ulcer

The total number of cases of gastric ulcer which could

be completely followed was 75. In 62 of these cases crater healing time was determined with reasona accuracy. In 6 cases the time of healing was noted on day of surgical exploration rather than by X-ray stu In 6 cases healing was confirmed by repeated gas scopic examinations. In 19 of these 81 cases it was possible to follow the case studies through to a f determination of crater healing time, so these cases h been designated as "lost cases". The six reasons for loss are as follows: —

First, there was no adequate follow-up st possible in 6 patients because they did not return fo adequate number of follow-up examinations. Howe one of these patients had a huge ulcer which was kn to have healed up completely three months after studies for vitamin U therapy terminated, and anoth still under observation irregularly. *Second,* 4 pati went to surgery before vitamin U therapy could be c pleted largely because they were forced to operation cause of the opinion of consulting physicians. This gr of patients was confined entirely to the earlier grou case studies. *Third,* there were 3 patients in this se with cancer of the stomach which was suspected from time of onset of medical management. All 3 were pro to have carcinoma at the time of subsequent operat *Fourth,* there were 2 patients with cardiac disease died during the observation period or subsequent th to. One of these cardiac patients, an elderly woman a large ulcer, died suddenly of coronary occlusion eight days of vitamin U therapy. The second patien man eighty years of age, who was showing improven clinically and by X-ray while receiving vitamin therapy, developed acute cardiac failure, was unab continue treatment, and succumbed. No autopsy

rmitted. Autopsy in the case of the elderly patient ing of coronary disease revealed a benign gastric ulcer. *fifth* and important group of cases is comprised of tients whose ulcer failed to heal during the period of dy. There were 3 cases in this group, or 4.8 per cent of e 62 cases adequately followed. One patient had a poly-hemia vera with extensive scar and granulation tissue volving a huge ulcer which had penetrated into the ncreas. A second patient had long-standing chronic patitis and recent active hepatitis at the time his large stric ulcer was under medical treatment with vitamin Healing failed to occur during 3 weeks of therapy and rgery revealed a large benign gastric ulcer. A biopsy of e liver showed marked activity of the hepatitis. A third d most instructive case was a female patient forty-two ars of age with the syndrome of "canal pylorique" who d a constantly recurring ulcer niche at the outlet of the mach. She showed the characteristic symptoms of this pe of ulcer, which were primarily nausea and vomiting lowed by bouts of persistent epigastric pain. Healing curred repeatedly during vitamin U therapy, but even th prophylactic treatment with vitamin U ulceration uld not be consistently prevented. At the time of opera-n it was found that the normal structures of the pyloic ll were completely replaced by scar tissue which was herent to and involved the head of the pancreas. The *th* and last group of "lost cases" includes one male tient who is still under observation with a large recur-nt postgastrectomy gastric ulcer which has not yet res-nded to vitamin U therapy carried out over a period of o months. He has kept actively at work during this ole time.

The crater healing time for each of the three groups cases of gastric ulcer and the average size of the lesion

for each group is shown in Table I. The results clea indicate that small ulcers heal up on the average in period of about 2 weeks. Their healing times varied b tween 6 and 34 days. Large ulcers may require 7 to days longer to heal. The times varied between 11 and days. The greatly prolonged crater healing time whi occurs in huge gastric ulcers could only be studied in of 8 patients with benign lesions. In these 6 the avera time of healing with 8.5 weeks, which is so much long than the healing times in the patients with small lesions that this type of gastric ulceration can hardly compared to them in its response to treatment. A rece report of 7 cases in the literature indicates that the benign giant gastric ulcers rarely heal up medical under ordinary forms of treatment and suggests that th should all be operated upon.

The effect of activity on this group of patients wi measurable ulcers which could be followed to final crat healing time is recorded in Table II. It shows th approximately two-thirds of the patients were treat with bed rest at least during the early part of their i ness, while approximately one-third were allowed to ambulatory. Because of the relatively small number cases available for study, no analysis has been record relative to the size of the ulcer and to activity. Clinical it has long been evident that large ulcers do not alwa heal satisfactorily when the patient is ambulatory and one of the cases herein reported this was quite obviou This patient, a 54-year-old widowed female, insisted working long hours in the post office while receiving vi min U concentrate therapy for a lesser curvature gastr ulcer 1.5 cm. in diameter and 1.0 cm. in depth. Whi she showed some symptomatic relief and a slight dimin tion in the size of her ulcer crater, she failed to impro

nsistently. After two months she was put to bed and eated with vitamin U concentrate in a dose equivalent 2 quarts of fresh cabbage juice daily. X-ray showed the ion healed in 25 days. Although the ambulatory cases this series required on the average only 5 days longer heal than those put at rest, there may well be indivi- al cases of large ulcers which will not heal progres- ely while the patient is active. Consequently bed rest ould be made an integral part of the treatment of large stric ulcers.

iteria of Successful Vitamin U Therapy

In the evaluation of a new method of treatment of ptic ulcer it is always difficult to distinguish between improvement in the patient's condition which could attributed to the specific effect of the type of therapy ilized and an improvement which could have occurred dependently and as part of the tendency of the disease develop a remission during its natural course, particu- ly under ideal conditions of suitable rest, diet, and notional calm. With this in mind the effect of medical eatment on ulcer crater healing time as shown by X-ray s chosen as the soundest objective method of determin- g whether or not treatment of benign gastric ulcers th vitamin U was of any real therapeutic value.

Unfortunately it has not as yet been possible to carry t any carefully planned, long-term preventative experi- nts with vitamin U therapy. The fact is that most tients when they are well will not consistently drink ge amounts of raw vegetable juice or eat large servings bulky uncooked greens, which might offer them ade- ate protection against a return of ulceration.

Although the question of "keeping the patient well" th vitamin U therapy has not been properly explored,

the evidence at hand suggests that vitamin U offers mo in this respect than other forms of medical treatment than surgical treatment.

Conclusions

Benign gastric ulcers as a group, including small, lar and huge lesions, all tend to heal completely and re tively rapidly while receiving vitamin U therapy.

Only 3 of a series of 65 cases of benign gastric ulc failed to heal when they were adequately followed. these 3 cases the cases of failure were dense cicatric tissue replacing the normal structures of the stoma wall and severe hepatitis.

As the criteria of successful treatment which have be presented seem to substantiate the effectivnss of vitam U in promoting the healing of benign gastric ulcers, would appear justifiable to give vitamin U therapy thorough trial before submitting patients to surgery.

TABLE I

Average Crater Healing Time of 60 Cases of Gastric Ulcer Treated with Vitamin U

ULCER SIZE	NUMBER OF CASES	CRATER HEALING TIME (DAYS
Small (0.3 to 1.0 cm.)	36	14.8
Large (1.1 to 2.4 cm.)	18	22.9
Total	54	17.4
Huge	6	56.8
Total, plus huge ulcers	60	21.4

TABLE II

Effect of Activity on the Crater Healing Time of 53 Cases of Gastric Ulcer Treated with Vitamin U

ACTIVITY	NUMBER OF CASES	CRATER HEALING TIME (DAYS)
Bed rest	35	20.3
Ambulatory	18	25.0

CHAPTER TEN

RAW JUICES AND DIET FOR COLITIS

COLITIS is a disturbance of the intestinal tract, characte ized by inflammation of the large intestine. It is fr quently of nervous origin. A neglected condition, or i correct treatment, of constipation is usually anothe factor.

There are three types of colitis: (1) Simple colitis—a irritable colon. (2) Mucous colitis—the secretion and pa sage of large quantities of mucous in the stools. (3) Ulce ative colitis—inflammation and ulceration of the mucou membrane of the large intestine. (Because the cause symptoms and treatment of ulcerative colitis are distin tive with each individual case, no typical data will b given here.)

In all forms of colitis there appears to be some conne tion between the condition and some disturbance of th nervous system. Persons known to have a "nervous ten perament" usually have "finicky" appetites and the diet omits many valuable nutrients, especially the vit mins and minerals. They are frequently the victims constipation. Diet, therefore, plays an important part the treatment of this disorder.

Simple Colitis

Symptoms: The patient usually first becomes awa of this condition through an uncomfortable feeling flatulence, distention of the abdomen, pain a diarrhoea. As a rule, a constipated condition preced the diarrhoea.

Cause: Disorders of the nervous system are frequently n important causative factor. Also, unbalanced diets and oor, irregular eating habits causing constipation; the se of laxatives and cathartics, enemas and colonic irriga-ions in an attempt to relieve constipation without com-etent advice, all aggravate the disorders of the nervous nd digestive systems.

Enemas and "high colonic" irrigations should never be dministered except upon the advice and under the irection of a competent naturopath or physician. The ame holds true of cathartics and laxative medicines. A egimen of proper nutrition, if carefully planned and ersistently carried out, will keep the digestive tract in a ealthy condition and constipation can be avoided. Ade-uate vitamin and mineral intake also helps strengthen he nervous system and this, too, will be reflected in the ealth of the digestive tract.

Dietary Treatment: The diet usually prescribed is a land one. When it is fortified with fresh fruit and veget-ble juices, the necessary vitamins and minerals will be pplied. It should be free from roughage, all fried foods, ices, condiments, stimulating beverages and other irri-nts. In other words, the diet should omit all substances hich might irritate still more the already inflamed con-tion of the colon. It should contain foods which will lp overcome constipation and supply the nutrition quired for improving the general health of the patient.

ucous Colitis

Symptoms: As suggested by the name, this type of litis is characterized by the secretion of considerable uantities of mucous in the intestinal tract. In severe ses, there is mucous and blood in the stools. The first

symptom of this disorder is constipation and sever abdominal pains or colic.

Causes: Nervous tension is usually one of the prin cipal causes of mucous colitis. Persons affected are gene ally high-strung and of a nervous temperament. Nutr tional deficiency brought about by careless eating habi and resulting in constipation and irritation of the colo is often another cause.

Dietary Treatment: In the acute stage, the patient advised to have complete rest and relaxation, both men tal and physical, so as to relieve the nervous tension. Th first step in the treatment is to determine and correc the cause of irritation. The diet should then be arrange to maintain the patient in good nutrition and relieve th irritated condition of the colon by supplying a lo roughage diet which is adequate in protein and rich i vitamins and minerals.

The foods in this diet should be of a soft consisten to overcome the existing irritation and to prevent diste tion of the colon. The vitamins of the B complex a especially necessary to improve the tone of the intestin tract as well as that of the nervous system. Wheat ger and brewer's yeast are recommended for this purpos Proper diet will help overcome the constipated conditi and encourage the expulsion of the mucous.

Since the dietary treatment is the same for both simp and mucous colitis, the following typical menus can ser in either case.

MENU NO. 1

Upon arising:

Warm water with the juice of ½ lemon—8 oz. gla

Breakfast:

Fresh apple juice—5 oz. glass.

Oatmeal gruel with tablespoon of wheat germ.
Egg soft boiled or poached.
Whole wheat toast (fine)—1 thin slice buttered; chew well.
Yeast drink or herb tea.

Mid-morning:
Carrot juice—5 oz. glass.

Lunch:
Tomato juice—5 oz. glass.
Creamed mushroom soup.
Pureed carrots and stewed celery.
Yogurt and baked banana.
Herb tea or a glass of raw certified milk.

Mid-afternoon:
Carrot-celery juice—5 oz. glass.

Dinner:
Carrot-celery juice—5 oz. glass.
Stewed chicken—small portion.
Mashed potato—small portion.
Pureed peas—small portion.
Gelatin desert—flavoured with apple or orange juice.
Herb tea or glass of raw certified milk.

Before retiring:
Carrot-celery juice—5 oz. glass.

MENU NO. 2

Upon arising:
Warm water with juice of $\frac{1}{2}$ lemon—8 oz. glass.

Breakfast:
Orange juice—5 oz. glass.
Soya cereal.
Yeast drink or herb tea.

Mid-morning:
Glass of raw certified milk or apple juice.

Lunch:
Carrot juice—5 oz. glass.
Creamed tomato soup.
Stewed prunes and apricots.
Yogurt or glass of raw milk.

Mid-afternoon:
Carrot juice—5 oz. glass.

Dinner:
Carrot-celery juice—5 oz. glass.
Veal with stewed tomatoes.
Asparagus tips pureed.
Strained apple sauce.
Herb tea or glass of raw certified milk.

Before retiring:
Carrot-celery juice—5 oz. glass.

CHAPTER ELEVEN

RAW JUICES AND DIET THERAPY FOR THE ARTHRITIC

S IS TRUE with so many other diseases, in practically all ses of arthritis there is a history of vitamin and mineral eficiency in the diet. It is to remedy this lack that fresh uit and vegetable juices are included in the dietary eatment of this ailment.

So that you will be able to understand better the con- tions which influence an attack of arthritis, we will out- ne briefly the usual symptoms. This description is non- chnical and is only intended to be informative: it ould not be used to diagnose your own symptoms.

Symptoms: Arthritis is characterized by inflammation, velling and pain affecting any one or more joints and is ten accompanied by fever. There are several different rms of the disease classified under the general heading f arthritis. The first step, therefore, is to have a careful nd thorough examination by a competent naturopath r physician so that he can determine the exact nature of ne symptoms and the probable factors affecting them nd adapt dietary therapy to fit the individual case.

The primary cause in many cases is an infection in me other part of the body. In some other cases, the thritis may be localized in one particular spot, caused, erhaps, by an injury—very often which occurred in the ast and has long since been forgotten—and which has uilt up infection . . . probably because of the subnormal

health of the individual. In the vast majority of arthrit cases, the person has been living on a poorly selected die usually with a preponderance of heavy starches, suga and fats and a correspondingly low intake of fresh frui and vegetables which supply the essential vitamins an minerals necessary for a wholesome diet. A deficien of the vitamin B complex has also been shown to exist i a very large majority of arthritis cases and this can b overcome by including wheat germ or brewer's yeast i the diet.

Arthritis may be divided into two main categories acute arthritis and chronic arthritis.

Acute Arthritis

The patient should be given the benefits of a promp diagnosis and treatment as the acute symptoms of arth ritis appear before they have a chance to gain a firm foo hold in the affected joints. In this way you may avoi permanent deformation.

Symptoms: The acute form of arthritis is believed t be caused by infection or germ-carried in the bloo stream, in most cases, from other parts of the body. I fected teeth, for example, may sometimes be a causativ factor—as may also be diseased tonsils or sinuses. An other outstanding cause is believed to be infection of th intestinal tract—constipation—and other similar cond tions. Germs left in the system after recovery fro certain "childhood" diseases are thought to be a co tributing factor in childhood arthritis.

Treatment: During the acute stage of the diseas complete relaxation—both mental and physical—is the utmost importance. The patient should be ke warm with hot water bottles or electric pads to promo

irculation. Heat alleviates pain and lessens the inflam-
nation and swelling also.

The first step in the treatment is to reduce the fever
nd ease the symptoms of the acute stage, especially to
vercome the constipation that is almost certain to exist.
All possible sources of infection should be checked and
s soon as the acute symptoms have abated and the
atient's condition permits, the primary source of infec-
ion should be cleared up before a complete and perma-
ent recovery can be expected. (In most cases this means
complete body-regenerating programme, for if the per-
on had been in optimum health in the first place the in-
ection would not have been able to find a stringhold in
he body.)

Children and young adults seem to be afflicted with
n acute form of arthritis—rheumatic fever—more than
lder people. Care should be taken to avoid exposure to
old and dampness. Wet feet, sudden chill and draughts
ower body resistance. Many doctors recommend that the
houlders be kept covered with a bed jacket or some
arm garment at night to avoid sudden exposure should
he bed clothes be thrown off. Strenuous exercise should
ot be tried for many months after the acute attack since
he heart is often left in a very weakened condition.
Treatment of the primary source of infection should not
e neglected after the acute attack has passed since a re-
urrence may lead to chronic arthritis and possibly per-
anent deformation of the joints.

Dietary treatment: As in all cases of high fever, the
atient suffering from acute arthritis should be under a
ompetent doctor's care. While the fever lasts, the diet
r acute arthritis is the same as in other fevered condi-
ons, *i.e.* the usual liquid diet of thin gruels, sometimes
einforced with wheat germ or brewer's yeast for the

vitamin B complex, broths and an abundance of fresh fruit and vegetable juices.

The arthritic sufferer should drink plenty of liquid as they are easily digested and are free from irritating substances. A total of three to four quarts—12 to 1- regular size glasses—of fluids, including water, fresh frui and vegetable juices—clear soups and other liquid should be taken in small quantities so as to help in th elimination of the toxins resulting from the infection.

Fresh fruit and vegetable juices—apple, pineapple grape, orange, grapefruit, pear, carrot, celery, cucumbe —should be an essential part of the permanent dietar regimen. These juices supply the vitamins and mineral necessary to regulate body functions and to aid in th utilization of other nutrients by the body.

As the patient improves other foods may be adde gradually to the daily menu until a general well-balance diet is attained which will provide adequate nutritio to maintain weight and vitality for increased activity The diet should be low in sweets, starches and fats; i should be especially rich in vitamins and minerals; and i should be normal as to proteins—the usual tendency i to over-concentrate on these. If the diagnosis is gou meat should be restricted.

Chronic Arthritis

In chronic arthritis there are two outstanding type known as chronic infectious arthritis (rheumatoid arth ritis, rheumatic fever) and chronic degenerative arthriti (osteoarthritis). In the infectious type, characterized b rheumatic fever, the cause can usually be traced to th neglect or improper treatment of a previous attack o acute arthritis. It more frequently attacks young adul than the older age groups but people of all ages may b affected. The so-called degenerative type usually occu

middle-life or older, and is frequently accompanied by rdening of the arteries. The person is frequently over-eight and usually constipated. More women than men ffer from it and it occurs in many cases during the enopause period.

Chronic degenerative arthritis is also known as osteo-thritis because of the accumulation of calcium, sodium ate, bone or cartilage at the afflicted joints. This accu-ulation causes painful swelling, inflammation and en-rgement of the joints. The fingers, wrists, knees, or kles usually are the first to be affected, although any ie or more of the joints may become involved.

Frequently the arthritis pain extends beyond the joints the muscles of the legs, shoulders, arms or back so that might be confused with neuritis, sciatica or lumbago. careful diagnosis by your doctor is essential to deter-ine the exact nature of the disorder so that suitable eatment may be decided upon.

The diet should be designed to reduced acidity in the stem and to prevent—or overcome—constipation. It ould consist of easily digested food and supply an abun-nce of vitamins and minerals to aid in the utilization other food elements and to keep the body functions in healthy condition. Fruits and vegetables—especially eir fresh juices—also wheat germ, brewer's yeast, milk, gurt and eggs can supply all of the nutrients needed r a balanced diet.

iet in Arthritis

Upon arising:

The juice of ½ a lemon in a glass of warm water. Never drink lemon juice without water.

Breakfast:

Choice of apple juice, orange juice, baked apple,

grapefruit, prunes, apricots or strawberries; so
boiled or poached egg.
Whole wheat or rye toast with butter.
Raw certified milk or herb tea. If you must, u
honey to sweeten the tea.

Mid-morning:

Eight ounce glass of apple juice.

Lunch:

Juice: choice of eight ounce glass of carrot juic
carrot and celery juice or carrot-beet-cucumb
juice.
Entre: choice of 2 tablespoonfuls of cottage chee
with canned fruit (or pears, peaches, grapes) c
lettuce leaves or $\frac{1}{2}$ cup of shrimp, crab or salmo
with $\frac{1}{3}$ cup chopped celery on lettuce leaves.
Salad: mixed vegetable salad (tomatoes, celery, c
cumber, string beans, watercress, parsley and le
tuce)—$\frac{2}{3}$ cup—with olive oil and lemon dressin
Bread: one slice of whole wheat or rye toast wi
butter.
Dessert: choice of 1 medium baked banana, 1 lar
orange or other fruit dessert, 2 tablespoonfuls
prune jelly with cream or 2 tablespoons of pru
or apricot whip.
Beverage: one glass of milk or buttermilk or he
tea.

(Note: If a hot plate is desired as an entre, you m
substitute for the entre given above two poache
eggs or a hot vegetable plate (average serving)
some of the following: string beans, carrots, celer
beets, beet tops, spinach, broccoli, asparagus tip
squash or dandelion greens).

Mid-afternoon:

Eight ounce glass of carrot juice.

Dinner:

Choice of eight ounce glass of carrot and celery juice or carrot-beet-cucumber juice.

Entree: choice of small serving of broiled steak, roast beef, chicken (roasted, broiled or stewed), roasted lamb or one broiled lamb chop or broiled or baked fish.

Vegetable: choice of steamed beets, string beans, spinach, carrots, celery, dandelion greens, broccoli, asparagus, squash.

Salad: choice of $\frac{1}{4}$ head of lettuce or canned pear (2 halves), or 1 medium tomato or average portion of fruit salad, mixed vegetable salad or apple and celery salad with olive oil and lemon dressing.

Bread: choice of one slice of whole wheat or rye with butter.

Dessert: choice of baked apple, prune jelly with cream, malaga grapes or any other fruit desired or canned pear, peach or apricot (average portion).

Beverage: choice of one glass of milk, buttermilk or herb tea.

Before retiring:

Choice of eight ounce glass of celery juice or carrot-celery juice.

Drink sufficient water to make up a minimum of eight asses of liquids during the day under normal condi-ons. During arthritis attacks, your fluid intake should between 12 and 14 glasses daily including water, oths, herb teas, milk and fresh fruit and vegetable ices.

CHAPTER TWELVE

CITRUS BIOFLAVONOIDS NATURE'S "MIRACLE" HEALERS

THE BIOFLAVONOIDS (bio meaning active, rather than i
ert; flavonoids meaning the crystalline substance whi
provides the yellow colour in certain foods such as t
orange and lemon) provide a source of new life to me

Although orange and lemon juices contain the greate
concentrations of the bioflavonoids, other fruit and vege
able juices, such as those of the other citrus fruits, pe
pers, cabbage, tomatoes, strawberries, water melon, a
numerous others, also contain them.

The principle consituents of the chief bioflavonoi
include several types of vitamin C, vitamin K, vitamin
ascorbic acid and hesperidin, a crystalline substan
largely concentrated in the peel and pulp. Thus not on
must the juices of these fruits and vegetables be take
but also the pulpy flesh should be eaten, and the pee
chewed or sucked. Also contained in the bioflavono
foods are other vitamins, amino-acids, protopectin a
minerals.

The orange is one of nature's finest gifts to ma
Orange juice contains pre-digested food in a most de
cious and attractive form, ready for immediate absor
tion and utilization. Even full milk is not superior
orange juice in nutritive value as some might expe
Numerous green vegetables have a nutritive value
greater than that of orange juice. One or two orang

aken at bedtime and on arising in the morning are an xcellent means of stimulating bowel action. The de-ghtful flavour and general stimulating influence of range juice excites peristaltic activity, and so tends to revent the accumulation of food residues in the colon hich leads to putrefaction and autointoxication. As a od in fever cases, nothing could be more perfectly uited to the requirements of the patient's condition.

The importance of citrus fruits in preventing and reating scurvy has long been recognized. However it is ot so commonly realized that the bioflavonoids have a ery beneficial effect on the capillary walls, improving heir permeability and strength. It is now established hat victims of rheumatoid arthritis suffer from abnor-nally fragile capillaries. The body is not able to retain nd absorb vitamin C which improves capillary resist-nce. When certain patients were given not only vitamin C in citrus fruit juice, but also hesperidin (of the peels) esearchers concluded that there was improved retention f vitamin C.

Beneficial results from the administration of hesperi-lin and ascorbic acid have also been reported in such onditions as rheumatic fever, rheumatoid arthritis, dia-etic disease of the retina, and hemorrhages of vessels.

In arteriosclerosis the vessels lose some of their perme-bility with the result that nutrients fail to pass through nd support the body. The bioflavonoid group juices—ith added calcium—are also recommendable here.

Also, the citrus fruit juices are especially recommen-ed for pregnant women (8 ounces a day is suggested). n this case the capillary walls must be strengthened to andle an increased retention of fluids and edema.

For the common cold no treatment has been discovered

which is as beneficial as the increased intake of vitami C by citrus fruits and fruit juices.

The fruit must be consumed as fresh as possible an the pulp should be included in the juicer.

CHAPTER THIRTEEN

BRONCHITIS OR COUGHS—JUICE REMEDIES

MODERATE quantities of dilute fruit juices may be take at intervals of about two hours. Unsweetened blac currant tea (which may be made from blackcurra purée) or lemon juice sweetened with honey are suitabl Otherwise take pure apple juice or grape juice.

Remember that during this time the body is not in condition to digest and assimilate food.

By this time I may have conveyed to you the impre sion that all juices, no matter how you combine ther can be nothing but beneficial. In order to set this matt straight in your mind, I have listed below some fruit an vegetable juice mixtures which should not be used b cause they do not go well together.

Apricot Juice should not be taken with the juice *greens.*

Blackberry Juice should not be taken with the jui of *Beets,* or *Beet Tops.*

Fig Juice should not be taken with *Radish Juice.*

Grape Juice should not be mixed with *Carrot Juic*

Grapefruit, Orange or *Lemon Juice* should not b taken with *Cabbage, Turnip Top* or *Watercress Juic*

Pear Juice should not be mixed with *Tomato Juice*

Prune Juice should not be taken with *Cabbag Watercress* or *Onion Juice.*

CHAPTER FOURTEEN

NATURE'S WAY TO HEALTH

THE REAL reason for so much ill-health today, as I view t, is that despite the fact that practically everyone eats hree or more times a day, the majority seem to have not he slightest curiosity about the nature and functions of ood. It is only when some illness strikes them that they ccept regulation of the diet as a necessary evil, but soon asten to resume their old eating habits as quickly as ossible.

But the person who becomes interested in whether e is eating health or disease finds himself regarded, in a neasure, as a crank or faddist. If the schools taught the hildren and if the newspapers taught the grown-ups it would make practical dietitians of all adults within a hort span of years. As things stand now, however, it is loubtful if a newspaper would permit any health food tore or even a health-minded individual to advertise the ad effects of sulphured fruits, white flour breads, white ugar, etc., when the bulk of their advertising revenue is erived from sources that advertise these health destroy-ng foods.

I have always contended that common sense is as great virtue when it comes to foods as it is in every depart-ent of life. It is important that we learn to distinguish etween natural and denatured foods; and to remember at the diet that will maintain steady good health, is also

the diet that will restore health. To lay out and follo a special diet for correcting a specific ailment, while the same time subconsciously thinking that one's forme eating habits can be resumed as soon as a "cure" is affe ted, is a fallacy. It cannot be done.

There is no doubt in my mind that the chief caus of disease are food and drink, that is, when they a wrongly used. The continual, excessive use of unnatura devitalized wrongly prepared and combined foods is th chief means by which mankind continues to dig its grav with the knife and fork. But, at the same time, it mu be borne in mind that, when properly used, the two chi sources of life and health also are food and drink.

If we were to believe what we read in the newspape these days, the medical profession is curing all diseas with "newer and better" drugs. Of course, increasin attention is being paid to the importance of some foo substances, especially the vitamins. But I wonder ho long it will take them to learn the lesson and ackno ledge it, that nature and nature alone prevents and cur diseases. Nature is powerful. It is the only doctor th can cure, getting results where others fail. Nature wi cure many diseases if left strictly alone; if it is not hi dered by the use of irrational methods of treatmen serums, injections, operations. These methods only su press disease. Precious few medical men really know ho to remove the cause of disease and really restore good an permanent health. They are taught to cure diseases b giving drugs, yet chronic diseases continue to increas

Nature's pathway to health—priceless, precious, happ health—is the only road to travel to regain or mainta a sound physical and spiritual body.

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MOLASSES
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